

does not permit this is false economy. Of the two evils, too many classes, or too large classes, if a choice had to be made, I should unhesitatingly select the latter. The high school composition teacher should be programmed for four classes a day; this will keep him busier than any other teacher on the staff. A superior teacher who knows how—and the technique is very new—can instruct thirty or thirty-five pupils in a class, or 120 to 140 pupils in all. If the teacher meets five classes, the result, in my judgment, will be less satisfactory, even with the same number of pupils altogether. And a principal who programs a composition teacher for more than five classes a day, including study-hall and all other work, probably cannot under any circumstances have really good teaching. There is no opportunity, either in time or in free energy, for the individual contacts which produce the best results. A superior teacher caught in a system with such ideals had better move.

Golf is a great game—greatest of all when it is fun. There are a multitude of complicated habits to be attained before one's play becomes really expert, and some of them are trying to one's soul. But the ideal teacher—bless him—teaches them one by one so simply that they are easy to master; and while doing so, he never spoils the fun.

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¹*The Labor and Cost of the Teaching of English*. Committee report, National Council of Teachers of English, 506 West Sixty-ninth Street, Chicago. Price, 10 cents.

²Sterling A. Leonard, "How English Teachers Correct Papers," *English Journal* XII: 517-532 (October, 1923), gives much specific material on this point—typical of what every one engaged in training teachers of English regularly finds.

³J. Leslie Hall: *English Usage*, Scott, Foresman & Co., 1917, is a delightful storehouse of material of this kind, with 141 sections, each devoted to a particular "error." The book costs \$2.25; it is worth \$225 to a teacher who would keep out—or climb out—of deep ruts. It is a very valuable offset to Woolley's *Handbook* and its kind, which, although valuable tools, are as arbitrary as could be, and sometimes fall into the very error here stigmatized.

VIRGINIA'S PROGRESS IN THE CURE AND PREVENTION OF TUBER- CULOSIS

IN the days of our grandparents or great-grandparents tuberculosis was considered hereditary and incurable. The man who had this disease thought he was doomed to die and that nothing could be done to help him. The doctors, knowing no more about the disease than the people, had their patients put to bed and shut away from air and sunlight. This of course hastened their death. People naturally thought the disease was hereditary when whole families were dying from it one after another.

It was not until the latter part of the nineteenth century that a glimmer of light appeared with Pasteur's discovery of bacteria and fermentation. A little later Koch discovered methods of growing, isolating, and studying germs. In 1882 he isolated the tubercle bacillus. He grew the germ in his laboratory, inoculated guinea pigs with these laboratory-grown germs, and produced the disease. He had learned what caused tuberculosis, and the beginning of how it was spread.

By this contribution to scientific knowledge, Koch gave us the weapon with which to conquer tuberculosis; and during the years that have followed many doctors have devoted their lives to the study of the disease. We have learned that tuberculosis can be prevented and can be cured.¹ No longer are the tuberculosis patients put to bed and shut away from sunlight and air to die. No longer are the children of tubercular parents expected to have the disease just because their parents have it. We are told that thousands who in the days of ignorance would have contracted the disease, now stay well; thousands, who probably would have died, now live.

Death Rates in Virginia

Virginia is making material progress in the reduction of deaths from tuberculosis. Dr. W. A. Plecker, State Registrar, states that

¹*Virginia Health Bulletin*, No. 4, April 1923, State Board of Health, Richmond, Va.

this is being accomplished not only by a direct fight against the transmission of infection from patient to patient, but that improved knowledge of nutrition is doing much to prepare the people against the infection of the tubercular bacilli. The deaths from tu-

berculosis and death rates per 100,000 population in Virginia by years can be seen from the following chart which was sent to me from the Bureau of Vital Statistics, State Board of Health, Richmond, Virginia:

DEATHS FROM TUBERCULOSIS AND DEATH RATES PER 100,000 POPULATION IN VIRGINIA BY YEARS

	1913		1914		1915		1916		1917	
	Total Deaths	Rate	Total Deaths	Rate	Total Deaths	Rate	Total Deaths	Rate	Total Deaths	Rate
T. B. of Lungs	3184	149.6	3478	161.8	3608	164.5	3436	154.9	3383	151.6
Other forms of T. B.	407	23.7	436	20.2	395	18.1	446	20.3	410	18.5

	1918		1919		1920		1922		1921	
	Total Deaths	Rate	Total Deaths	Rate	Total Deaths	Rate	Total Deaths	Rate	Total Deaths	Rate
T. B. of Lungs	3728	168.2	3132	136.5	2994	129.6	2800	119.2	2772	116.8
Other forms of T. B.	365	16.9	313	13.7	325	14.0	331	14.1	339	14.2

There were in Virginia in 1915 more deaths from tuberculosis than had been the case in any other year. This is probably explained by the fact that accurate registration was established at that time. Since that year the number has declined except in 1918. The Bureau of Vital Statistics explains that the reason for the greatly increased death rate in 1918 was the large number of deaths from influenza of persons who had been weakened from tuberculosis and were easy victims of the new disease.² Had they not been attacked by influenza, they probably would have lived through the year and might perhaps have entirely recovered. All deaths giving tuberculosis and influenza as joint causes were classed as deaths from tuberculosis as only one cause can be assigned. That probably had some effect in reducing the death rate for tuberculosis for two or three years afterwards, as it removed a number of probable victims for the following years. This situation prevailed all over the civilized world.

The high death rate in the negro race is the most alarming factor in Virginia's tuberculosis problem. The death rate from tuberculosis for the entire population of Virginia is higher than that for the United States.³ A high death rate in either race reacts unfavorably upon the other because a large per-

centage of the negro race is still engaged in some form of domestic service. The intimate contact with white houses brought about by this service makes a communicable disease a danger among them, particularly to the children whom they serve as nurses, cooks, and laundresses.

Our State as a unit will continue to sustain an excessive loss from tuberculosis, experts remind us, so long as the disease and the death rate remain excessive in any large division of its population.

The State Board of Health

Official public health work began in a small way long ago when epidemics of Asiatic cholera, typhus fever, and yellow fever caused various towns and cities to organize boards of health for the protection of their citizens. It is said that the earliest of these boards in Virginia was established in Petersburg in 1780. But not until 1870 did a rapid development take place; the State Board of Health of Virginia was founded in 1872, the fourth State Board of Health in the United States. These early boards were organized mostly to check epidemics rather than to prevent diseases. After Louis Pasteur's discoveries of the relationship of microbes to disease and Koch's great discovery of the cause of tuberculosis, the world gradually awakened to the possibilities of public health campaigns. In many states and cities

²Report of Tuberculosis Committee of Virginia, 1920, Bureau of Vital Statistics, Richmond, Va.

³*Ibid.*

Boards of Health were organized so as to take advantage of the new knowledge. The State of Virginia was one of the first to seize this opportunity and its health board was reorganized by the legislature in 1908.

Captain W. W. Baker of Hallsboro and Dr. Ennion G. Williams of Richmond were responsible for the reorganization of the board. Captain Baker, who had seen close at hand the ravages of tuberculosis, found that there were no provisions for its cure anywhere in the State. He therefore worked to reorganize the Board of Health and incorporated in the bill the establishment of a

State Sanatorium. Dr. Williams was, prior to his appointment as health commissioner of the State, an X-ray specialist, but his dream was always to establish health work in Virginia. He worked first on the city of Richmond and, in connection with Dr. E. C. Levy, reorganized its bureau.

State Sanatoria

The State is now conducting three sanatoria for those of its citizens who have tuberculosis. The progress of these sanatoria can be seen from the following table:

These institutions offer, at the lowest possible cost to the patient, the best methods

THE STATE SANATORIA—THEIR GROWTH AND DEVELOPMENT

Three Sanatoria	Year Estab-lished*	No. of Beds		Enroll-ment 1923†	Lost by disc'rge 1923†	Lost by Death 1923†	Appropriation From State‡		Finances from Other Sources‡ 1923
		First Year*	1923*				First Year	1923	
Catawba Sanatorium Roanoke, Va.	1909	40	330	534	490	47	\$40,000	\$148,503.11	\$118,414.04
Blue Ridge Sanatorium Charlottesville Virginia	1920	60	175	356	332	20		134,083.31	57,306.41
Piedmont Sanatorium Burkeville, Va. (Colored)	1917	40	130	258	173	40		74,610.00	20,242.38

*Received from Miss Agnes D. Randolph, R. N., Director of Tuberculosis Education, State Board of Health, Richmond, Va.

†First Biennial Report of Public Welfare, for the two years ending September 30, 1923, State Board of Public Welfare, Richmond, Virginia.

of treatment and cure of tuberculosis. Several beds in each are provided free for any indigent person known to be suffering from tuberculosis.⁴ The Tuberculosis Commission brought in its report in 1916, and the appropriation for tuberculosis was increased to \$300,000; in 1918, to more than \$700,000; and last year to more than \$800,000.

To aid in preventing the spread of communicable diseases, the State Board of Health issues pamphlets that explain the causes and the means of prevention of such diseases. It sends lecturers to health meetings or other public gatherings, to explain how diseases are caused and carried, and to describe methods of protection against them. For the use of county or town health boards, health associations, or school clubs, it issues a series of well arranged charts and posters and other

exhibits. Any of this information may be had free of charge by writing to the State Board of Health in Richmond.

The State Board furnishes to county and town health boards, without charge, expert advice and assistance. Upon request it will inspect the living conditions in any city, town, or village and recommend any necessary sanitary improvements. It co-operates with the Board of Education in the physical inspection of school children. It co-operates with the county authorities in providing money for intensive health campaigns, and its field workers direct such campaigns. In doing these things the State Board is working toward relieving the situation.

Tuberculosis Clinics

Another agency that has done great good is the tuberculosis clinics which were organized by the Virginia Tuberculosis Associa-

⁴"Tuberculosis," Health Bulletin No. 5, State Board of Health, Richmond Va.

tion in 1917. They were paid for in part by a five thousand dollar appropriation made by the State for education. The tuberculosis committee of 1922 brought in a report which established the tuberculosis clinic unit as a part of the State Board of Health. It began its work a year ago last March and holds clinics, with no cost to the counties, in approximately forty counties each year. It has one doctor and four nurses and holds a four day clinic each week. There are thirteen prominent clinics, placed by the State at the following places: Norfolk, Richmond, Newport News, Alexandria, Arlington County, Lynchburg, Roanoke, Loudoun County, Leesburg, Hampton, Suffolk, Nansemond County, and Fredericksburg. The work of these clinics is to detect cases of tuberculosis. Here any one may come for examination, and tests are made free of charge. The state laboratory examines free of cost specimens for determining the presence of germs causing communicable diseases.

The Virginia Tuberculosis Association is a volunteer organization and was founded in 1908 just after the International Tuberculosis Congress was held in Washington. Dr. Ennion G. Williams, Dr. E. C. Levy, and Dr. William F. Drewry of Petersburg, Captain W. W. Baker, Miss Nancy Minor, Miss Frances Scott, Dr. Truman Parker, and Dr. J. T. Mastin of Richmond, Dr. Charles Grandy of Norfolk, and Dr. Douglas Freeman were the promoters of the Association. Captain W. W. Baker has served as president until this year, when Dr. Charles Grandy was appointed to the office. The proceeds with which to run this organization come chiefly from the sale of Red Cross Christmas seals.

The Christmas Seal sale of 1921 conducted by the Virginia Tuberculosis Association amounted to \$52,768.87. This money was distributed in the following manner:

Amount returned to locals	\$33,454.56
Amount retained by the Virginia Tuberculosis Association	14,847.72
Amount paid to National Tuberculosis Association (5%)	2,626.34
Expense of sale in cities and counties	1,840.25
Total sale for 1921	\$52,768.87

With the share of the proceeds which the Association kept, it conducted four-day clinics in 42 counties, the State Board of Health either providing the examining physician, or sharing this expense. At these clinics approximately 7,500 persons received absolutely free an examination by a specialist in the diseases of the lungs and heart. The positive cases were visited in their homes by the Association nurse and applications for admission to the State Sanatoria were filed, or instruction was given for home treatment. A month's supply of sputum cups and holders, and paper handkerchiefs were given to those who needed them.

Staff members delivered lectures in many parts of the State. Articles were furnished to magazines and newspapers. Literature and booklets on home care were widely distributed.

Last year the Christmas Seal sale was increased to \$55,568.30 and was distributed as follows:

Amount returned to counties and cities	\$35,851.67
Amount retained by Virginia Tuberculosis Association	13,663.11
Amount paid National Tuberculosis Association (5%)	2,778.42
Expenses of conducting sale in cities and counties	3,275.10

Total sale

\$55,568.30

The share of the proceeds kept by the Association in this year helped to support:

- Free tuberculosis clinics.
- Public health nurses.
- Indigent patients at sanatorium.
- Preventive work among children, including:
 - Health work in schools.
 - Fresh air classes.
 - Nutrition classes.
 - Summer camps.

Fresh Air Camps

There are several fresh air camps and two summer camps for children in the state. The children's summer camp at Cape Henry for the prevention of tuberculosis has been in operation for the past ten years. It is owned by the Anti-Tuberculosis League of Norfolk, of which Dr. Charles R. Grandy is secretary-

treasurer. Through Dr. Grandy this camp was first started, and it is still running because of his interest in, and work for, the League. When the camp was first opened, about ten children were taken in, but now twenty can be accommodated. These children stay all the summer, and so get full benefit of the rest, sea air and nourishing food.

All children going to the camp attend the Tuberculosis Clinic in Norfolk, and are "contact cases." All come from poor homes with crowded sleeping quarters; each of these cases was living or had been living with a relative having active tuberculosis. Everything at the camp is free. Medical care and even clothes are provided if necessary.⁵

Name	Location	Beds	Race	Rates
Hill Top	Danville	30	White	Up to \$20.00 per week
Pine Camp	Richmond	92	White	Free to Richmond Cases
City Home	Richmond	20	Negro	Free to Richmond Cases

There are three local sanatoria in Virginia:

There is one private sanatorium in Virginia. This is Mt. Regis Sanatorium, Salem, Va. It has a capacity of 65 beds and the rates are from \$21.00 to \$40.00 per week.

The results attained at the sanatoria have been of the greatest value and have been especially important in that they have demonstrated beyond question that tuberculosis can be cured in this climate. In previous years it was thought that for the cure of tuberculosis it was necessary to go to the far North or to the western States where the altitude is high and the air is dry. The State's experience has shown that patients have the best chance for permanent recovery if they take proper treatment in a climate as nearly as possible like that in which they expect to live after recovery.

As a result of the State health work, forty-eight counties employ public health nurses, ten employ sanitary inspectors, and eight have full departments. Every county in the State should have a sufficient number of nurses to visit the tuberculosis cases in its homes and to instruct them in the care of themselves and the protection of others. In many counties, however, health officers continue to receive from nothing to \$600 a year, although the health department in 1920 counted lives saved through preventive medicine by the thousands.

The progress has been great in fourteen years, but great opportunity still lies ahead of the health departments, state, city and county. Experience has demonstrated that to meet the needs of a community, a minimum of one bed for each annual death from tuberculosis must be provided. The report of the Tuberculosis Committee of Virginia for 1920 states that this would mean for Virginia approximately 3,000 beds, which with a reduced death rate might be brought down to 2,500. The State now has about 800 beds and, therefore, needs 1,700 additional beds in order to provide adequately for tubercular patients.

The Tuberculosis Committee also states that a definite continuous increase in funds is essential to meet the demand, as educational propaganda becomes more effective. They therefore recommend that the State institutions for tuberculosis be enlarged steadily each year, the increase to be at the rate of not less than fifty beds each calendar year, and not to exceed the demand as indicated by the waiting lists at the sanatoria. Major-General William C. Gorgas, late Surgeon General of the United States Army, said: "I consider that prevention of tuberculosis remains the most important health problem in this country in spite of all the work that has been done along this line."

SALLIE CLARKSON

⁵Bulletin of the Virginia Tuberculosis Association, 1921, Richmond, Va.